

1 **ABSTRACT**

2 A natural language parse ranker of a natural language processing (NLP)  
3 system employs a goodness function to rank the possible grammatically valid  
4 parses of an utterance. The goodness function generates a statistical goodness  
5 measure (SGM) for each valid parse. The parse ranker orders the parses based  
6 upon their SGM values. It presents the parse with the greatest SGM value as the  
7 one that most likely represents the intended meaning of the speaker. The goodness  
8 function of this parse ranker is highly accurate in representing the intended  
9 meaning of a speaker. It also has reasonable training data requirements. With this  
10 parse ranker, the SGM of a particular parse is the combination of all of the  
11 probabilities of each node within the parse tree of such parse. The probability at a  
12 given node is the probability of taking a transition ("grammar rule") at that point.  
13 The probability at a node is conditioned on highly predicative linguistic  
14 phenomena, such as "phrase levels," "null transitions," and "syntactic history"  
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